April, 2008 **Volume 4, Issue 4** **Copyright RCT**

FROM THE EDITOR...

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Good Grief, it's that time again!

Those of you who actually read the "Loggers Bark" will recall that I was intending to fire up the mighty "DK for this month's CQ WPX contest. Well, that did not happen, due to circumstances. Instead Nick K7MO and I went head-to-head in an informal competition.

We were neck-and-neck right up to the final bell. Nick probably beat me by a whisker. I say that because our final tallies were almost identical, I had a few more QSO's than Nick, but he had a few more multipliers than me, giving him the higher overall score.

But… it's not all over until the logs are checked and submitted!

Until then Nick and I will share a much deserved micro-brew at a yet to be determined venue. Really though, it was a good contest and well worth the time and energy spent over the week end.

Snow? In April?
Yessir, It snowed again and again in April… Makes you wonder what May is going to do huh?

73 All Gary WG7X

Board Meeting
5 March, 2008

The Board meeting was held at the Radio Club of Tacoma club house. President Randy Thompson AD7FF called the meeting to order at. 7:32

Officers and board members present:
President: Randy Thompson -- AD7FF
Vice President: Jill Palmer – K7JIL
Secretary: Larry Watson -- KD4VOM
Treasurer: Gary McFadden – K7UPG
Board Member: Al Burleson K7HW
Board Member: Alan Lentz – W7AML
Board Member: Bob Purdom – AD7LJ
Board Member: Frank Palmer – AC7LJ
Board Member: Gary Kohtala – K7EK

A sign in sheet with the names of members and guests is attached. There were 14 names on the attendance roster

MINUTES OF PREVIOUS MEETINGS: Were approved as distributed and coordinated by e-mail

SECRETARY'S REPORT: Larry Watson – KD4VOM

Correspondence: Larry reported the normal bank statements, utility bills and an insurance statement along with the usual club newsletters and some QSL cards.

A copy of the correspondence log is attached to the original copy of the minutes.

TREASURER'S REPORT: Gary McFadden – K7UPG

Gary commented on our new requirement to file an IRS 990 annual non profit report.

A copy of the Monthly financial statement is attached to the original copy of the minutes.

ILLNESS AND SILENT KEY: Larry KD4VOM reported that Al K7HW may be late this evening because his XLY is having surgery.

COMMITTEE REPORTS:

Membership: Rick KE7EMW reported that membership renewals are coming along well, with 246 received so far and 65 who have not yet responded. Rick plans to send a reminder to those who have e-mail addresses. If all renew, it appears that we will grow to over 300 this year.

Hamfest: Bob Purdom AD7LJ reports that planning for this year's Hamfest is coming along well. Bethel Junior High has been reserved, ARRL Sanction received, and we have our usual table at this Saturday's annual Mike and Key Hamfest. Bob and Harry W7HSA will cover the table, but other club members who plan to attend are encouraged to cover the table occasionally to relieve Bob and Harry.

A recent Hamfest planning meeting resulted in the selection of Steve Blacksten KD7UBE and Harry Adams W7HSA as Treasurer and Assistant Treasure for this year's Hamfest. The Club Treasurer, and Harry are already on the Hamfest bank account, but Steve needs to be added. Motion was made, seconded and passed to add Steve Blacksten KD7UBE to the Washington Mutual Hamfest Account. The Secretary will prepare the required letter for the President's signature to officially notify the Bank of the changes in the Hamfest Bank account access authority.

Planning Team Report: Larry KD4VOM reported that the planning team continues to work on the Internet Resources Team SOP document and several drafts have been circulated, but a final version has not been agreed upon. The Planning Team continues to support Hamfest Planning, development of a RCT Property Management SOP and completion of the Financial Review recommendations.

RCT Network/Packet issues Meeting: Larry reported on the results of the network internet access meeting held on 17 February to research problems Gary K7EK has been having with remote access to the W7DK Packet system. Present at that meeting were Nick Winter K7MO, Steve Morton AD7AB, Gary Kohtala K7EK, Bob Heselberg K7MXE, Al Burleson K7HW and Larry Watson KD4VOM. The consensus of those present was that Gary's inability to access the Packet system remotely was due to the ISP reassignment of our IP address. The recommendation was to research the availability and cost of securing a "Static" IP address service. The Club's cable access is provided by Tacoma "CLICK" and they have three authorized Internet Service Providers, Advanced Stream (which we are presently using, Net Venture, and HarborNet. Larry reported on the costs from each of these providers to supply a "Static" IP service. There are various options, but for comparisons, using annual costs:

Advanced Stream would be $ 519.72; Net Venture $ 540.93 and HarborNet 551.40.

Our current annual bill is $ 339.96. Rick Rose KE7EMW raised the question of why Gary is having trouble with remote control of the Packet system when Rick has experienced no change in the IP address assigned by Advanced Stream since last year. Rick also pointed out that the current router drops out frequently when it is hot, especially in the summer months when the upstairs HF room gets very warm. At the meeting Larry offered to organize another meeting to review the issues and help determine if we have in fact identified the only and probable cause.

A copy of the 17 February Meeting minutes are attached to the original copy of these minutes.

Facilities: Steve Blacksten KD7UBE reported on the club furnace. One of the two heating elements is bad. He also repaired the intake vent and installed an "L" bracket to keep the furnace side cover from falling off. Larry KD4VOM reported on the Heritage company bid of $ 2054.44 to install a replacement furnace. Al K7HW has been doing research on used furnaces as well. Since we are approaching the summer months, there is no pressure to act now, but we need to decide on a course of action by this fall so that if the other heating element fails, we don't suffer freezing our plumbing system. Jill K7JIL recommended we contact K7RED who does this kind of work for a living.

Steve also noted we need an all-weather flag, since the one we had shredded in the last windstorm and the current flag won't last very long.

Safety and Security: Rick Rose KE7EMW will look into including video surveillance and smoke/fire detection in our proposed Security System update.

UNFINISHED BUSINESS:

On-Line Auction/Internet Resources Team:: Larry KD4VOM reported that several versions of a Policy and Procedures document have been exchanged but no agreed upon final document for presentation to the Board yet. Hopefully by the next/April Board meeting.

Property Management: Larry KD4VOM reported that the Planning Team has been working for some time on a Property Management Policy and Procedures document. He hopes to have a draft for the Board by the next meeting.

Equipment Inventory: Bob AD7LJ noted that work will resume soon on completing the equipment inventory.

Copy Machine: Larry KD4VOM reported the recent problems where two of the three paper feed trays jam, and Mick Pier KK7QS inspected and we need parts.

John Clarke AC7WW was unable to print the 40 some Barks for mailing due to paper jams earlier this week.

The Board agreed that we should use a commercial printing service if we cannot get the printer repaired.

Trailer: A short discussion on the use of the travel trailer included a suggestion that we plan to use it for one of the stations at Field Day. Steve KD7UBE reminded us that a temporary repair of a ceiling vent needs attention. The Board approved spending around $ 12.00 to replace the damaged vent.

NEW BUSINESS:

W7DK Packet System Proposal: Gary K7EK tabled a proposal to retire the 440 packet radio and replace it with a 220 system, which would require a Yagi directional antenna and cabling. Nick K7MO has advised us we have the cabling, and the Equipment Team will research our holdings to see if we have a suitable 220 radio to use. Al K7HW knows where we can find a large 220 beam.

Open House Duty Officer: Larry KD4VOM proposed that the club adopt a policy and procedure of having a Club Officer or program manager with key access to the club to serve as the Club's official representative. Duties would include meeting and greeting visitors, accepting and documenting donations, providing membership applications and similar duties. If there was no host for the coffee and donuts, the duty officer would assume those duties as well. The Planning Team will come up with a draft Duty Officer procedure. Steve Blacksten KD7UBE volunteered to take the 15 March Session and Gary K7EK will take the March 29 Session.

We need volunteers for 22 March as well as April 12, 19 and 26th.

A motion was made, seconded and passed to establish a Club Duty Officer.

ANNOUNCEMENTS:

Pete KK7QW has donated an HF Rig to the club.

Discussion Topics:

Commemorative Coins: Larry KD4VOM reported on an idea by Rick KE7EMW and Al K7HW to develop a club commemorative coin to help in our awards and recognition program. Al and Larry visited the Northwest Mint and brought back three sample coins which were circulated. The mint estimates a $ 400 cost for creation of the original die and coins can be produced in normal quantities for around $ 4.00 each. In future meetings we hope to determine if the Club should pursue this idea and how.

Hand Generator: Chuck Kemmer AC7QN proposed to construct some hand cranks for a recently donated hand generator to use at this year's Field Day. The Board agreed.

Scrap Metal Project: KD4VOM reported on a recent trip by Al K7HW and Bob K7MXE to a metal salvage organization. Prices are high for salvage metal, and it occurred to us that the Club might make some needed cash by soliciting salvage metal contributions from the membership, arranging to have them picked up and sold for salvage to benefit club operations. The concept was well received. Larry will contact Bob to work out the details of the project.

File Cabinets: Larry KD4VOM reported on a GSA salvage trip by Al K7HW and Larry where he picked up a 4 drawer lateral file cabinet to house our club records. It is proposed to paint the cabinet and install it in the back of the classroom.

Mike and Key Challenge: Al N7OMS reminded us that the Mike and Key Field day challenge a couple of years back where we lost and were to provide a suitable plaque has had no action on our part. The Board agreed we need to honor our challenge and deliver a suitable plaque to the Mike and Key Club.

Salmon Run Fund Raiser: Al N7OMS suggested that we begin planning for this year's Salmon Run Fund Raiser. He recommended the planning team meet and try to improve the process we used last year. We also need to identify suitable projects for money raised.

In Camera Session: After visitors departed the conference room, the Board held an in-camera session to discuss a personal matter. Minutes of the special session will be sealed and secured until no longer needed/relevant by the Secretary.

The meeting was adjourned at 9:15

Board Meeting
2 April, 2008

The Board meeting was held at the Radio Club of Tacoma club house. President Randy Thompson AD7FF called the meeting to order at. 7:35

Officers and board members present:

President: Randy Thompson -- AD7FF
Secretary: Larry Watson -- KD4VOM
Treasurer: Gary McFadden – K7UPG
Board Member: Al Burleson K7HW

A quorum not being present, no official business was conducted.

A sign in sheet with the names of members and guests is attached.

MINUTES OF PREVIOUS MEETINGS:

No action

SECRETARY'S REPORT: Larry Watson – KD4VOM

Correspondence: Larry reviewed recent correspondence which included the usual utility, phone bills, bank statements and other club newsletters.

A copy of the correspondence log is attached to the original copy of the minutes.

TREASURER'S REPORT: Gary McFadden – K7UPG

The treasurer provided current balances for our bank accounts.

The Treasurer received the proceeds from the RV Shelter donated by Paul and Mary Bellona in the amount of $ 100.00.

Bills were presented for Lawnmower gas, and vent cover for the trailer, and a deposit of income from the 29 March Open House.

Budget

Gary K7UPG asked if anyone has a program to help construct a budget. Larry has one, and recommended we have a budget/planning meeting with all the committee/program chairs to review past expenditures and future needs/expectations to construct this year's budget.

Rick KE7EMW is developing a budget management database capability for his areas; Safety and Security, Membership, and the Awards Banquet. Rick recommends we consider waiting until this project is completed so that we gather information needed to fit in the program.

A copy of the Monthly financial statement was not available.

ILLNESS AND SILENT KEY: Larry KD4VOM reported on Worth W7WG's recent eye surgery

COMMITTEE REPORTS:

Membership: Rick KE7EMW reported 280 renewals by the 31 March deadline with 37 members from last year falling into the lapsing category. A listing of lapsed members was reviewed by the board members present.

There was a discussion of how to encourage and promote ARRL membership, especially through the club.

Rick also announced that the annual membership roster will be ready for printing and mailing soon. He sought approval to use the Costco at Fife printing service at their Exposition period which provides very reasonable per page printing. Those present concurred. Rick also sought approval to use envelopes to mail this year's rosters to prevent the damage that some reported from the fold and seal method used last year. Action: Larry KD4VOM will check with John Clarke AC7WW to determine feasibility and whether this mode incurs additional costs.

Hamfest: In Bob AD7LJ's absence, Larry reviewed the Hamfest planning status; actions completed, and remaining tasks. He also reported that the signatures for the Hamfest account have been changed as directed by the board; removed Linda Adams KE7FKX and added Steve Blacksten KD7UBE.

Planning Report: Larry KD4VOM provided a brief review of the Planning Team's support to Property Management and Online Auction/IRP procedural development as well as support to the Hamfest team, Club records research and the financial review recommendations.

Facilities: Steve KD7UBE reports that his tour of duty as Facilities interim facilities manager is ended, and we need to look for a replacement. He has significant conflicting commitments this summer.

There were no **Library**, **Museum**, **Training**, **Safety and Security** or **VE reports**

UNFINISHED BUSINESS:

W7DK Packet System: Larry reports that we continue to look for the equipment to move the packet system to a 220 system. The 440 radio has been turned off.

RCT Network: Larry reported on the second packet system/internet access issue meeting which was prompted by concerns that the first meeting did not consider Rick Rose's experience with the current ISP dynamic IP service being reliable since last June.

> The probable causes of the two known incidents can be attributed to router configuration work done by
>
> The free and existing DynDNS internet service account we currently have will allow continued remote access to our ISP account/router, eliminating the need to purchase a static IP address. This should be operational when the wired networking is completed and network equipment is moved to the downstairs equipment bay. (Mick KK7QS said that proximity of the router to the cable modem can also cause interference and they should be separated as much as practical).
>
> Don AC7FA has donated a replacement router which should be installed when the gear is moved downstairs and the combination is expected to minimize the heat related issues associated with our current upstairs modem.
>
> The current phone line 253-752-XXXX which is used for remote access to our repeater can be terminated. Nick K7MO will be providing a remotely controlled switching device which will allow us to use the "2040" phone line to

remotely access/control our digital systems.

Action: Larry KD4VOM confirm it's ok to close out the 253-752-XXXX line; circulate results to the Board, and shut down the line if approved.

RCT Open House Duty: Larry KD4VOM reviewed the planning underway to support the Board approved decision to continue the Club's Open House program and designate qualified officers and committee/program chairs to support the Duty Officer/Host responsibilities. The Planning Team hopes to have a draft circulated in time for approval at the May Board meeting.

Copy Machine: The Copy machine remains an unreliable asset, now working with only single sided on one tray. Mick KK7QS advised us that he had sent a message about a possible replacement machine, a Sharp 355A digital machine which he has on consignment, which can be had for $ 800.00. No one present had received Nick's message and he will resend it.

Action: Larry KD4VOM to use copy machine information to circulate to all Board members to determine if there is a majority who are in favor of purchasing the copy machine.

NEW BUSINESS:

None:

ANNOUNCEMENTS:

Working Waterfront Maritime Museum/Tall Ships: Bob AD7LG has been approached by Ms. Joanne Francis to consider the possibility of setting up an Amateur Radio museum display during the Tall Ships event. Bob is over committed and is seeking volunteers to explore this opportunity.

Discussion Topics:

Scrap Metal Project: The idea of collecting scrap metal from the membership and turning it into cash was discussed. So far we have no one willing to step up and manage the project, but do have several with pickup trucks/ trailers willing to pickup and deliver scrap metal to salvage.

The meeting was adjourned at 9:20 pm

GENERAL MEMBERSHIP MEETING MINUTES
12 March, 2008

The 12 March 2008 monthly membership meeting was held at the Pierce County Library Administration Building. President Randy Thompson, AD7FF, called the meeting to order at 7:30 PM.

Officers and board members present:
President: Randy Thompson AD7FF
Vice President: Jill Palmer K7JIL
Treasurer: Gary McFadden K7UPG
Board Member: Alan Lentz W7AML
Board Member: Al Burleson K7HW
Board Member: Bob Purdom AD7LJ
Board Member: Frank Palmer AC7JY

A sign-in sheet with the names of members and guests is attached. There were 42 names on the attendance roster.

PLEDGE OF ALLEGIANCE:
Led by President Randy Thompson.

INTRODUCTIONS:
Self introductions were completed.

HEALTH WELFARE OR SILENT KEY:
There were no reports of illness or silent key.

SECRETARY'S REPORT:
In lieu of Secretary Larry Watson's absence, Pat Wingerter, WT7N, recorded minutes and reported correspondence of phone bill and bank statements.

COMMITTEE REPORTS:
Rick Rose, KE7EMW, reported membership for 2008 at 256. Deadline for inclusion in the new membership roster is March 31, 2008. Rick also reminded everyone that if they join or renew their ARRL membership through the club, as an ARRL affiliated club, we get to keep a small portion of the fee.

PROGRAM:
Jim Fenstermaker, K9JF, Division Director for the ARRL, gave a very informative overview of the ARRL. His presentation covered public service, education, membership, and advocacy. There was also a short period for questions.

ANNOUNCEMENTS:

Harry Adams, W7HSA, announced that there are some very good tips for PSK31 operation on the ARRL's website.

Lynn Neece, K7OKS, commented that the "propeller-on-a-pole" at his table at the Mike & Key hamfest last weekend drew a lot of attention. Good job, Lynn!

TUNING AND TRAFFIC:

Rich Patrick, KR7W, reported that while listening to his restored Transoceanic shortwave radio, he discovered he was listening to Arnie Coro a Cuban radio amateur who was describing how to build a particular shortwave listening antenna. The actual shortwave station was Radio Habana located on (approx) 6140 Kilo Cycles in the 49 meter shortwave band.

Door Prize:

Pete, KK7QW, won a 1M measuring tape from Japan Radio Club which was donated by Si Nelsen, KA7AQT.

Jay, KD7DKY, won an EZ Wire handbook.

Thank you to Dennis Farnes, KA7IIV, for donating a Cushcraft 6-40M vertical antenna as a door prize, also.

The meeting was adjourned at 8:55 PM.

MINUTES
26 March, 2008

The 26 March 2008 Monthly Membership meeting was held at the Pierce County Library Administration Building. . Secretary Larry Watson, KD4VOM called the meeting to order at 7:35 PM.

Officers and board members present:

Secretary: Larry Watson -- KD4VOM
Treasurer: Gary McFadden – K7UPG
Board Member: Al Lentz – W7AML
Board Member: Al Burleson -- K7HW
Board Member:Bob Purdom -- AD7LJ

A sign in sheet with the names of members and guests is attached. There were 62 names on the attendance roster

PLEDGE OF ALLEGIANCE:

Was led by Larry Watson KD4VOM, Secretary

INTRODUCTIONS:

Self introductions were completed

ILLNESS OR SILENT KEY:

There were no reports of Illness or Silent Keys

SECRETARY'S REPORT: Larry Watson – KD4VOM

Correspondence: Larry KD4VOM reported the usual bank statements, utility bills and club newsletters.

TREASURER'S REPORT: Gary McFadden – K7UPG had the financial report available

COMMITTEE REPORTS:

Membership: Rick Rose KE7EMW reported that current paid membership stands at 271 with around 41 not yet renewed.

Rick plans to publish the new club roster which will include those paid up members as of 31 March.

PROGRAM: Ken Gibson, N7ELF introduced Mike Mertel K7IR from SteppIR antennas who presented tonight's program.

Mike K7IR presented the detailed, informative and entertaining story of the development of SteppIR antennas from concept to current operations and a glimpse into future developments. The concept of an adjustable antenna for amateur radio use began as an idea and through perseverance, technical engineering expertise, and determination evolved into one of Ham Radio's recent success stories.

Mike described the development process which was populated with several failed ideas, but always moved the project closer to a reliable, functional, and effective Yagi antenna design, both electrical, and mechanical. The result is today's SteppIR's suite of antenna products which have gained wide acceptance and attention.

ANNOUNCEMENTS:

Canvas RV Shelter Donation: Steve Blacksten, K7UBE's daughter has offered a 34x14x14 foot canvas covered metal framed shelter to the club. This shelter is being replaced by a new one this coming Tuesday. If there are any willing to participate in taking the shelter down this weekend, see the Secretary after the meeting.

Secretary's Note: Due to inclement weather, some of the normal meeting activities were curtailed to allow more time for our members to explore and discuss tonight's presentation.

Door Prize:
No Door Prize

The meeting was adjourned at 9:25 pm

VE REPORT John AC7WW

Four candidates and eight Volunteer Examiners gathered at the Radio Club of Tacoma's clubhouse on Tuesday, March 11th 2008. Six elements were graded with three being passed. One candidate failed to either get a new license or upgrade.

Three new Technicians, including two young men one thirteen and the other fourteen, joined the Amateur Radio Service.

Thanks to the following volunteer examiners for their time:

Harry, W7HSA
Al, AC7BU
Bill, AB7WJ
Don, K7QLC
Bob, AD7LJ
Jon, AD7AW
Steve, AD7AB

Salmon Run Funds
AL, N7OMS

As promised, I wish to bring the Club members up to speed as to how the Salmon Run Fund Raiser proceeds have been spent. This part will be easy as all the monies went for a new roof. We raised $4,648 dollars and spent $5,222 on the new roof. Very good timing it seems as the roof had reached the end of its useful life.

As I look around the club house I see there have been many changes. Just visit the Museum and you will see what I mean. Our museum staff is dedicated to getting some of the older rigs back on the air. It is also scheduled to have access to the internet. There is a sense of moving forward while making the past easier to see and touch. The library group has made the history of the club one of its top priorities and will soon have two newer computers for membership to use. With the new shelves almost done access to the clubs wealth of information will soon be possible.

These changes have been made possible by the donation of dollars, time and talent. If I was to start a list of the people that I'm aware of and what they have contributed we would need to add several pages to the Bark. So let me say THANK YOU for all that you have done and Good Job.

Still as I look around and talk to other members there is much yet that could be done such as blinds on the windows, molding for the upstairs, new furnace, a second tower, improvements to the existing tower, a second third and fourth station in the HF room, more storage and work space for club projects like a three car garage on the lot next door. Lots of idea's and I'm sure you have even more.

A group is being formed to begin the fund raising process for this year's Salmon Run. Last year the process evolved as we went forward and in hindsight we see things in a different light. We had little experience with fundraising and this year we hope to have a better handle on things.

If you want to be involved just let me, Larry Watson or Rick Rose know. We would love to have more input and if anyone has experience we could use your help. Keep the Radio Club of Tacoma in mind when you plan your charitable contributions for the year of 2008. With the talents of the membership helping we can make those dollars go a long way. Thanks again for making last year's Salmon Run Fund raiser such a success.

Dateline: April 2008

Sparky's "View from the Shack"

This and that around the club, and more…

Sparky's *welcomes comments, ideas and letters to "The RCT View", but reserves the right to procrastinate, and generally ignore social engineering or cranky inputs. Editorial philosophy — While there occasionally may be reason and rhyme as we go along, the goal is to ramble through the many and varied activities of the Club and its members as we take another trip around the sun.*

- *Kind of a quiet month*
- *Winning Programs*
- *Scrap Metal for Cash?*

It's been a quiet month

So Sparky hasn't much to talk about…

Programs, we've had some winners

Not sure exactly why but attendance at the regular membership meetings is on the rise, and despite some crummy weather. We've had that great "Software Defined Radio" presentation by Bruce, and last week an outstanding presentation from the folks at SteppIR Antennas…
Thanks in great measure to our Program Manager Ken N7ELF we've enjoyed a great run of programs recently… Despite really bad weather…The Gents from SteppIR drew a large crowd who really enjoyed the technically smart and really entertaining presentation...

Scrap Metal for Cash???

Sparky has learned that scrap metal prices are pretty good recently and there is some discussion of kicking off an RCT fund raiser to collect scrap metal donations from our membership and turn it in to needed cash for club operations.

Attaboys:

This month Sparky wants to extend a well done to Roger Holme who has kept the coffee and cookies coming for our regular membership meetings. Rich N7ANF continues in the working world, and I'm told is working six days a week, just raking in the cash. Puts a real crimp in his ability to do his traditional bit at the meetings. Thanks Roger for picking up the slack.

Donated Stuff…

Sparky has noticed what seems to be a feeding frenzy whenever some gear shows up, either at the clubhouse or at meetings. The Club derives a fair portion of its income from donated equipment, and when gear is delivered to the Club, it is presumed to be donated to the Club, and not up for grabs by whomever happens to be there. The Club takes possession, documents, inventories and provides formal IRS required feedback to the donors. Then the Club determines if the gear is needed for the Museum, Library, Field Day, etc, and/or whether it should be sold at Hamfest or some other venue to raise funds for Club operations. The rule is when gear is presented at the Clubhouse or a meeting it is presumed to be donated to the Club unless and until the donor advises an officer of the Club otherwise.
In fact a tip of Sparky's fedora to Leonard KA7NWF who donated a box of goodies, some of which he received from his first Elmer years ago…Thanks Lenoard.

View from the Shack…

Sparky notes — Heard a lot of rag chewing about the big WPX contest last weekend, all the dedicated and determined contesters were busy churning the airways for contacts and sharing tips. Some have said we've also seen an occasional improvement on 10 meters which we all hope is a harbinger of the upswing of the solar cycle…

The Disclaimer…

These articles are intended to browse through recent activities and coming events of possible interest to the Radio Club of Tacoma members. It will of course by design and intent be informal and attempt to record some of the Club's activities that might otherwise go unnoticed.

Sparky

The journey of a thousand miles begins with a broken fan belt or a leaky tire...

New and Improved ARDF Attenuator for Hidden Transmitter Hunting

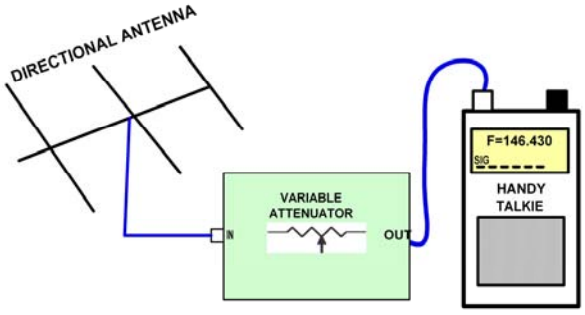
By Rich KR7W

Spring is here and to some hams that means it is time to be thinking about finding hidden transmitters- one of the categories in the "radio sport" part of the amateur radio hobby. You will read elsewhere in this issue of the Bark that the radio club is hosting a big 'Fox Hunt" on May 10 that coincides with (and is part of) CQ Magazine's International Fox Hunt Weekend. The intent of this article is to provide technical information to help the interested radio enthusiast to get started with **A**mateur **R**adio **D**irection **F**inding.

The usual tools for the beginning ARDFer is a directional antenna, an attenuator, and a receiver.

The most popular antenna for newbie's as well as OTs is the WB2HOL 3 element Yagi made from 1 inch tape measure material. (This antenna will be discussed in the May issue of the Bark.)

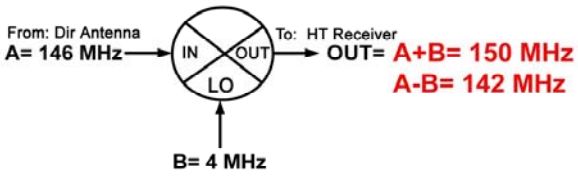
The attenuator is the device that is needed to lower the hidden transmitter's signal down to a useable level by the receiver. Without the attenuator the receiver's signal strength meter will be saturated to full scale most of the time and the hunter will not be able to get a bearing while rotating the directional antenna.



This article will focus on the variable attenuator needed in the combination of ARDFing equipment. The closer the hunter gets to the Fox (or Bunny= names of the hidden transmitters) the higher the received signal will be. With this in mind… it is important to be able to vary the level of attenuation to keep the receiver's S meter from saturating when rotating the directional antenna. Perhaps you've seen RF attenuators advertised that have many toggle switches to adjust the attenuation by flipping in different steps of attenuation for a total of 95 dB. This type will not work very well for ARDF because there is not enough attenuation at hand when the hunter gets close to the transmitter. Also, it is difficult to flip the switches quickly to get a good S meter reading before the transmitter's signal shuts off for the quiet interval. The best kind of attenuator is one that has a knob that varies the level (for quick adjustments) and has at least 140 dB of attenuation.

Enter the '*Offset Attenuator'.* The offset attenuator uses a common phenomenon in radio theory called mixing or heterodyning (does superhetrodyne ring a bell?) In the offset attenuator there is an input (the signal from the hidden transmitter via the antenna), a local oscillator, and an output (to the receiver). A quick lesson of the theory says: The input signal is combined with the local oscillator (LO) signal in the mixer. The resultant **output** will be the received signal frequency plus (and minus) the LO frequency. Example: A received freq of 146.000 plus / minus the LO freq of 4.000 = 150.000 and 142.000. Tune your handy talkie receiver to one of the *offset* output frequencies and you will be right on to receive the Fox.

Simple Mixer Circuit



The attenuation is adjustable by varying the amount of LO signal to the mixer circuit. The only drawback to this attenuator is the fact that the user can not achieve 0 db of attenuation. The loss of this attenuator is approx 40 to 150 dB. This means that if your Fox signal is too low to be heard through the attenuator then

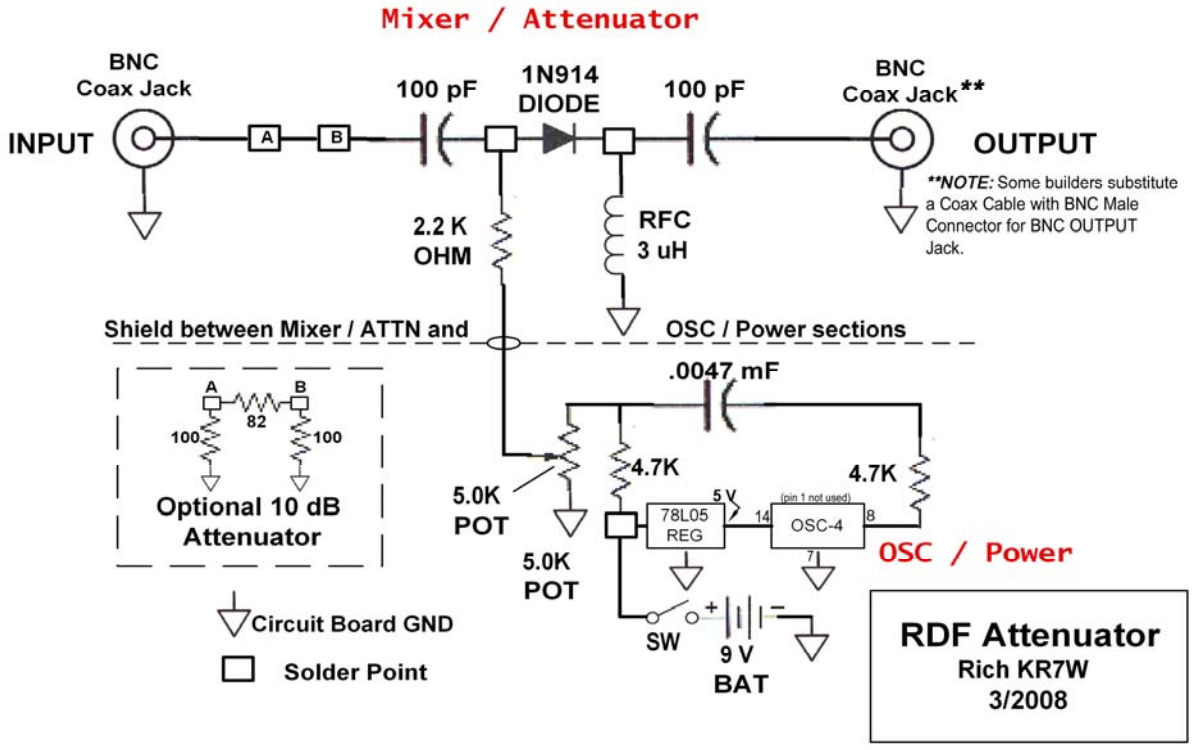
Continued next page...

you will have to bypass the attenuator, tune your HT to the actual Fox frequency, and determine the direction of the signal source.

History Lesson: Two years ago myself and Chuck AC7QN held a "build it" class at the radio club where 7 or 8 members built Tape Measure Yagi antennas and a version of the Offset Attenuator found on the web. One member could NOT get theirs to work. After taking it home and troubleshooting it with my O'scope I discovered flaws in the design: The recommended plastic enclosure box did not shield the high output LO signal from the mixer circuit. So the level of the mixer could not be controlled very well at high receive levels. The LO signal was leaking all over the place. (It is just like having RF in your ham shack when you transmit… it can make other equipment work funny.) Also, when the hunter was close to the Fox transmitter… the strong signal would leak through the plastic enclosure and the level of attenuation could not be controlled very well. After much experimenting with different local oscillators and shielding methods… the following is what I have come up with that works very well.

Circuit description: Note the dashed line on the schematic that separates the OSC / Power section (below) and the Mixer / Attenuator section (above). The received signal enters the INPUT jack. Note the squares labeled A and B. This is where an optional 10 dB resistor attenuator solders to. If you do not desire the 10 dB attenuator then leave the jumper between points A and B. The INPUT signal travels through the 100 pF capacitor to the diode (mixer). From the diode the mixed (up) signals pass through the second 100 pF capacitor to the OUTPUT jack to your HT receiver. The RFC (radio frequency choke) provides a DC path for the diode's bias voltage to GND. The output signal is dropped across the RFC, also.

Below the dashed line resides the power supply and OSC section. The 9 volt battery feeds two directions. 1. Through the 4.7 K ohm resistor and 5.0 K ohm potentiometer to GND. The center of the pot feeds part of the 9 volts to the diode mixer circuit to establish bias voltage. 2. Also to the 78L05 regulator unit



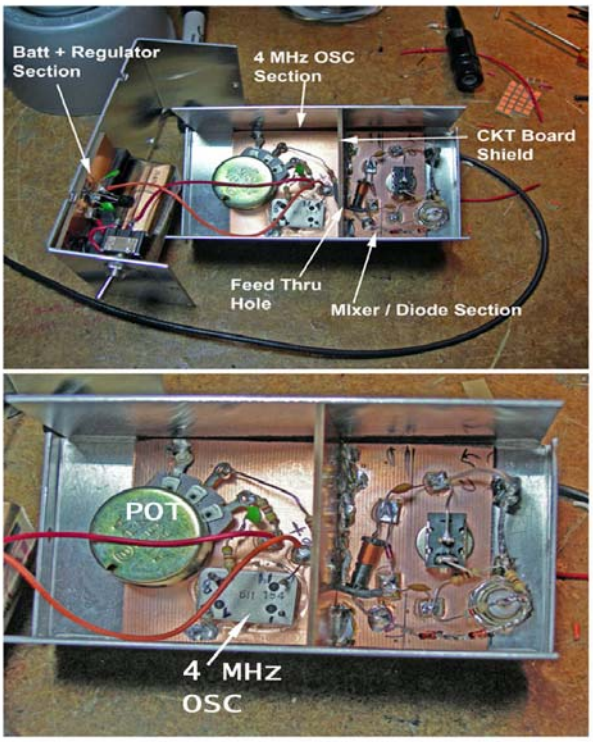
The schematic shows a BNC connector at the OUTPUT. My attenuator has acoax cable with a BNC male plug that plugs directly into my HT receiver. Either method works well.

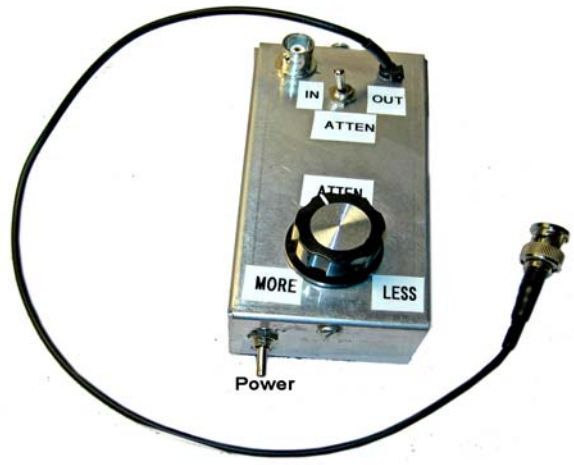
Continued next page...

The 78L05 outputs the needed 5.0 volts DC to run the OSC-4 (4.000 MHz oscillator module). The output of the OSC-4 feeds into the 5K pot via the .0047 mF capacitor. The 5K pot also varies the level of the 4.000 MHz oscillator to the diode mixer. Adjusting the pot to lower the OSC-4 level to the mixer equates to more attenuation of the received input signal.

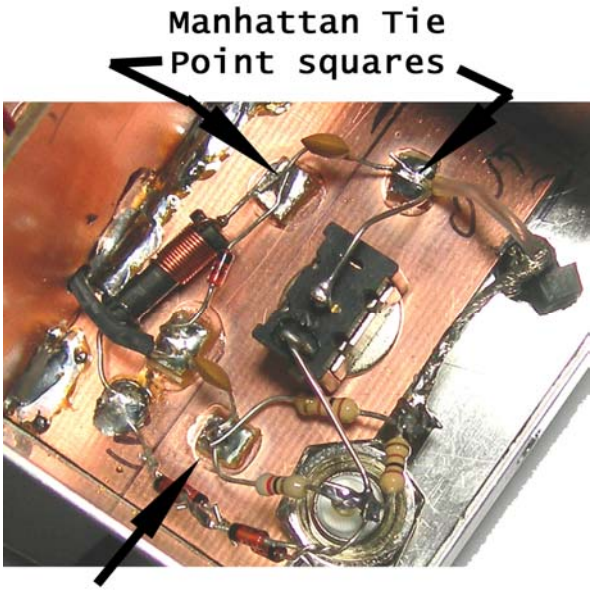
Building the Attenuator: The success to the attenuator working well is to place the parts in an RF proof enclosure. Second to that is to isolate the OSC/Power section from the Mixer/Attenuator section within the enclosure. The components are connected together using the combination of Manhattan and Dead Bug (aka flying lead) circuit construction.

Manhattan construction uses a piece of blank copper printed circuit board (PCB) as a chassis with small (1/4") PCB squares super glued to the chassis. The small PCB squares are tie or connect points. These are shown in the schematic as small squares. The OSC-4 oscillator module is simply super glued to the PCB chassis with its leads aiming up for soldering to (dead bug style). The photos show the PCB cutting and enclosure drilling dimensions and placement of the parts.





This Active Attenuator differs from the schematic. It has a coax cable with male BNC plug instead of the BNC jack on the output side. Also shown here is a switch labeled ATTEN IN/OUT. The schematic for this article leaves this feature out.



Manhattan construction tie points are 1/4 inch pieces of PCB simply super-glued to the PCB chassis. The tie points are tinned with solder and the components are blob soldered down. See www.k8iqy.com for good examples of Manhattan construction.

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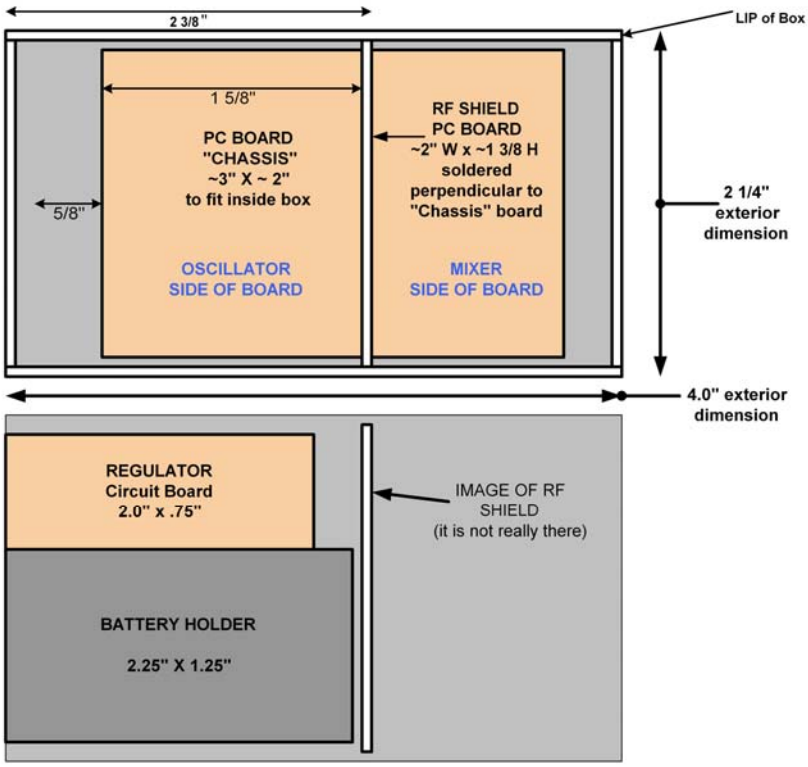
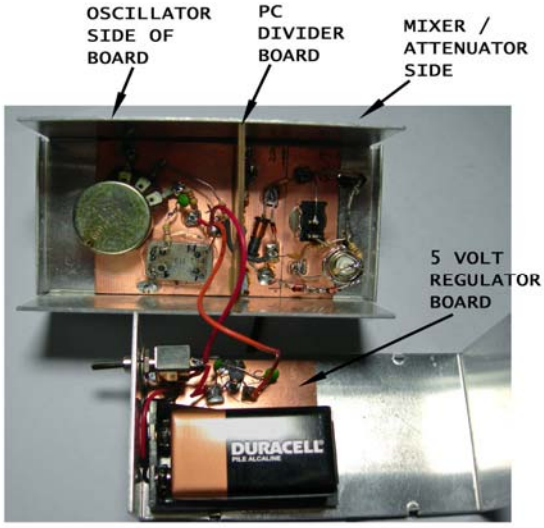


The above diagram shows the layout dimensions for the specified metal enclosure. (see parts list for the specific model of enclosure).

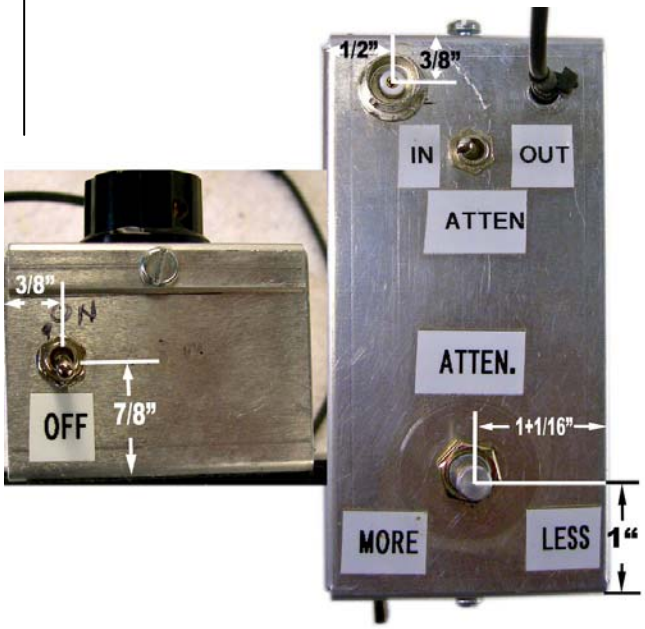
I use a Dremmel tool with diamond wheel to cut the PCB material. Be aware that there will be dust using this method. Also, a hacksaw with the aid of a vice can be used to cut the PCB Material.

Note that some round holes will be drilled in the metal enclosure. I laid out these holes on the enclosure, drilled them, then placed the PCB material in place. I then scribed on the PCB the location of the holes… then lastly drilled the holes in the PCB. Use some scrap PCB to make your Manhattan wiring connection pads.

Obtaining parts: A parts list is provided. I obtained most of the parts from one of my favorite parts suppliers: www.jameco.com. They have everything except the metal enclosure… which came from www.mouser.com. I checked the parts numbers and they are all current.



The more fotos the better… I say.



Above: Hole drilling layout. Note: The ATTEN IN-OUT Switch is not shown in this "how to do it" project. Remember, drill the holes in the enclosure then drill the PCB material.

Continued next page...

List of RDF Active Attenuator Parts	Source
BNC COAX JACKS (QTY=1 or 2)	Jameco.com p/n 355178
BNC Connectors RG-58 Coax (QTY=1 for atten. And 1 for the antenna.	Jameco.com p/n 355240
100 pF ceramic capacitor (QTY=2)	Jameco.com p/n 81525
1N914 Diode (QTY=1)	Jameco.com p/n 655269
RF Choke 3uH (QTY=1)	Jameco.com p/n 372365
5 K Ohm Pot w/ 1/4" shaft… (QTY=1)	Jameco.com p/n 286193 RS?
LM78L05 Voltage Regulator (QTY=1)	Jameco.com p/n 51182
OSC4 4 MHz Oscillator Module (QTY=1)	Jameco.com p/n 27967
9 Volt Battery Holder (QTY=1)	Jameco.com p/n 216427 RS?
9 Volt Battery	Radio Shack or elsewhere
.0047 mF ceramic capacitor (QTY=1)	Jameco.com p/n 138202
2.2K ohm resistor (QTY=1)	Jameco.com p/n 690945 RS?
4.7K ohm resistor (QTY=2)	Jameco.com p/n 691024 RS?
Printed Ckt Bd Material 3x6" (QTY=1)	Jameco.com p/n 169279 RS?
OFF-ON SPST Switch (QTY=1)	Jameco.com p/n 76523 RS?
*** SMA-male to BNC-female (if needed)	Jameco.com p/n 159476
Knob for Pot 1/4" shaft.	Jameco.com p/n 264892 RS?
Metal enclosure 2x4x1.5" LMB00P (QTY=1)	Mouser.com p/n 537-00-P
	RS? Means that you may find this at Radio Shack.

The above chart shows the needed parts. Note that the capacitors are purchased by the 10 quantity and resistors are by the 100 quantity. Even so… they are pretty cheap. I have the capacitors, resistors, and diodes in my lab. I will be happy to sell those parts to you for a buck.

Note that I have included a SMA to BNC adaptor in the list. This is for the folks who have a recently made handy talkie that uses a SMA antenna connection. The attenuator uses a BNC connector on it's output coax toward the HT.

I am willing to assist those who want to build this project. I have tools to crimp BNC connectors, drill holes, cut PCB, etc. If you think you need help… I will be happy to arrange to meet you or a group of folks in the RCT clubhouse museum on Saturdays between now and the big bunny (Fox) hunt on Saturday May 10th. Just let me know what kind of help you need so I can bring the right tools. Also, I am willing to help a group of folks on Sunday or some weekday evening. Let me know and we can arrange something. My phone # is in the RCT roster. Email me at: **rfpatrickXXX@yahoo.com. (rem XXX for delivery)**

Before I forget… *Important note to the group of club members who built the first version of the ARDF attenuators two years ago:* Most of the parts in the old attenuator will fit in the new version. All that is needed is the metal enclosure, some printed circuit board material, and maybe a new battery holder (depending on the style of the old one).

In next months Bark… I will show how to build the Tape Measure Yagi Antenna. Or… if you want to do it now then checkout:
See the club website… www.w7dk.org, scroll down the left column to the pink rabbit. Click

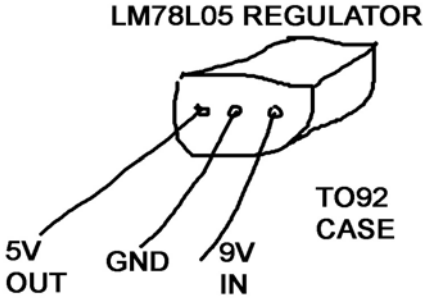
Continued next page...

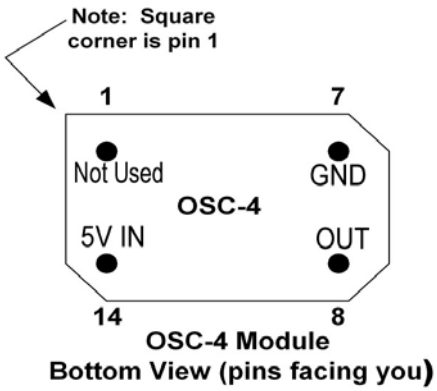
there and you will be transported to the RDF Info Page. Scroll down and find the Tape Measure Yagi link…. OR, See the May 2007 edition of QST Magazine. W1TRC builds the same antenna for 135 MHz, but include the dimensions for 146 MHz. Download the QST article at:
www.kr7w.org/TMY.pdf

Also, next month I will show how to attach your attenuator to the tape measure Yagi.

Be sure to come out to the ARDF Event on Saturday, May 10, at 1300. Bring your kids and/or grandkids. There will be transmitters hidden that are easy to find and more challenging IARU transmitters (5 on the same frequency) that transmit sequentially for one minute ON and 4 minutes OFF. Example: #1 on for one minute, then OFF. Then, #2 on for one minute, then OFF. Then #3 on for one minute… and so on. Joe… bring yourself and the missus out for this gig. If nothing else… it'll be a nice walk in the park.

Regards… Rich KR7W -30-





Additional diagrams for ARDF Attenuator construction...

Let's Get Connected… Here's some popular coax connectors used in radio equipment. The N connector has the least loss… followed by the TNC. If I had my way, I'd change my ham station out to TNC for up to 150 W and N for up to 2 KW. Submitted by Rich KR7W

MUSEUM MUSINGS

News from the Clifford J Doc Spike Museum

Hear Ye, Hear Ye, The King is Dead, The King is Dead. Long live the King.

I am sad to report that the King of Radio transmitters has died. The Museum's mascot, the Old Oak Rig is Kaput. The story goes like this: Last Saturday, Morel and I were in QSO with K6KPH, the famous KPH Maritime Museum at Pt. Reyes, CA and old Chirpy emitted it's last squeak. RD at KPH signaled back that he did not hear us anymore. We had no idea that it quit because we were still hearing our own signal in the Hammarlund HQ 120X when we were keying out our message to KPH. It wasn't until Cmdr Bob ran up the stairs to the Museum to tell us that KPH (K6KPH) had contact the clubhouse on IRLP to let us know we were not transmitting.

That was hard news to take… so I went from the Museum to my shack (about 2 miles away) and tried to make contact with W7OS. No luck with the Old Oak Rig… but when Morel connected the old WRL Globescout 65 to the antenna… it came through loud and clear.

Back at the Museum Morel and I worked for about 4 hours and couldn't figure out what the problem was. Hi voltage is Ok, Filaments are lit, but there was no dimming of the 866A mercury vapor rectifier tubes when we keyed down. Looks like only the XTAL Oscillator is working because we can hear ourselves in the HQ 120X receiver.

We decided that we needed the schematic of the Old Oak Rig. The rumor is that Worth and Mac W6NBD had drew the schematic and Worth took it home. We contacted Worth and he is still looking for it.

At a meeting of the Ad Hoc Museum Committee we decided not to wait for the schematic to repair the rig. We brainstormed alternatives to get the Museum's namesake back on the air. Some ideas included doing nothing and using the Globescout, Heathkit AT-1, Knight T-50, or fixing up the old Heathkit Scratchy Apache 110 pound AM rig. But the idea we settled on was to restore the Old Oak Rig with modern solid state transmitting parts.

It was my idea based on when I worked at the phone company and we purchased solid state replacement tubes for tube type carrier systems we were using that were left over from the 1930s. My research on the internet found some oscillator and RF amplifier circuits based on MPF105 FETs and MRF100 High Power Field Effect Transistors. The modern components can be easily mounted on printed circuit board material and screwed to the underside of the oak breadboard chassis. Small holes will be drilled through the oak chassis from the above board components to connect to the underneath the board modern electronics. Nobody will know unless they look carefully.

The puzzler was how to get the Mercury Vapor tubes (the 866As) to glow and change intensity when the key is down and the rig is transmitting. Ha! Wouldn't you know it...the internet has everything. I found replacement 866As at a antique radio supplier, Radio Daze, in NY. These tubes have been carefully cut open and a small circuit board and some high intensity blue Light Emitting Diodes are inserted, then glued back together. The 866A tube sockets are wired to the keying circuit to detect key down which cause the Blue LEDs to change in intensity. How cool blue is that?

So, next time you come to the Museum… pay your tributes to the Old Oak Rig. Say goodbye to the OLD and greet the NEW-technology to arrive soon. Also, pay tribute to the new parts by reaching into your pockets for some spare change and drop it into the ole Grid Leak Bucket to help fund the "new" Old Oak Rig.

The winner of last month's electrical circuit puzzle will be revealed at April 23's club meeting.

Best Regards from the Museum….KR7W

Bunny Alert

by Alan N7OMS

ALAN N7OMS

Attention! Attention!

The Radio Club of Tacoma has issued a **chartreuse alert.** Jacob and Fluffy are missing! Yes, that's right, Pat's WT7N bunnies are missing. She reports they were last seen at Point Defiance Park attending the Easter "Bunny Hop." Eyewitness reports claim that both bunnies were seen hanging with members of the "North Slope Rabbits", a group known to use CW. This group has been growing since Morse Code was outlawed. All is not lost however. Rich KR7W of ARL labs has surgically installed two meter radio transmitters into each bunny. We need everyone to converge on Point Defiance Park with their RDF gear to help with the search.

OK, OK, there are no lost bunnies and that's only a rumor that Rich has taken up surgery at ARL labs. We still need everyone to come on out to **Point Defiance Park's 5 Mile Drive Gig Harbor picnic site on May 10th, 2008.** CQ Magazine is holding the eleventh annual foxhunting weekend. They are asking ham operators and radio clubs to conduct hidden transmitter hunts the weekend of May 10th & 11th.

The Radio Club of Tacoma's RDF group has decided that this is a good event to begin their Fox Hunting season for 2008. Everybody is invited to attend. **The hunts will start at 1:30 PM and there will be refreshments at the end of the hunt**.

Foxhunting is good fun and it also has an important place in ham radio because of its uses for public service. RDF skills are called upon to find Emergency Locator Transmitters from airplanes and lost hikers equipped with beacons. It's also used to track sources of electronic interference. So plan to attend, we will have gear that can be borrowed and plans for RDF gear can be found on the Radio Club of Tacoma's web site. You will also see more information in this issue of the Bark.

Foto from 2006 DK at the Spanaway Beach Picnic. Art Jury, Mick KK7QS, and Nick K7MO get Hidden Transmitter Hunting advise from Art.

Satchquatch Hunter's Net
Every Saturday 1700 UTC
14.337 MHz USB

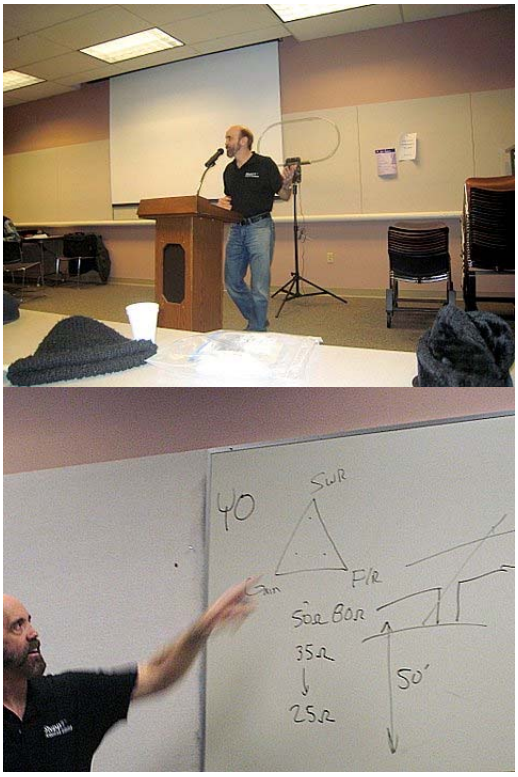
CQ Amateur Radio Magazine

Announces... 11th Annual Foxhunting Weekend
May 10 + 11, 2008 (Sat & Sun)

The Radio Club of Tacoma will participate in this event. The Foxhunt (or Bunny Hunt) will take place at **Pt Defiance Park's 5 Mile Drive Gig Harbor Picnic** area beginning at **1:30 PM on Saturday May 10**. A ham license is not required, so bring your kids or grandkids to share in the fun. Equipment will be on hand to borrow. This event will be practice for the Club Picnic in June. This event will (most likely) be written up in CQ Magazine. See article in this issue of The Bark and the club's website: www.w7dk.org

Mike K7IR, the (ir) in SteppIR, talks about the antenna, its theory of operation and how the company got started. Mike gave his demonstration during the March 26th General Meeting.

Photo's courtesy of Worth W7WG.



The ARRL Club Newsletter

Interdependency, The Need For Others In Order To Succeed
By Norm Fusaro, W3IZ

All relationships require effort from all who are involved. Member recruiting and retention has long been a challenge for local clubs and cultivating interpersonal relationships with your club members is important to achieving the goals of the club and its members.

As people we are independent, capable of our own thoughts, actions and opinions but as members of society we are interdependent and rely on others to fill certain needs. As radio amateurs our interdependence is as basic as the need to have another radio operator to establish a contact. The local club fills a need beyond this basic illustration and provides where we can go to meet with friends and share knowledge and experiences.

If the needs of the individual are the Ying then the Yang must be needs of the club as an organization. Clubs need members to manage club business and perform the jobs required to operate a successful club. One does not have to look too far to see that successful clubs rely on synergistic roles that benefit both the individual and the organization. If a club provides a way for non hams to get licensed then the club will recruit new members. The club that offers classes for licensed hams to upgrade will retain members. Active hams that are willing to share their experience will teach the newcomers who then become club members and so-on and so-on.

Clubs that seek perfection and a world all the members get along and agree on everything are striving for an unrealistic goal and often end up in discontent. Healthy and active clubs tend to work together as a group toward a common goal. Setting the goal can be a democratic process, which in itself is a healthy activity, however once the objective is set it takes the effort of everyone to achieve the result. For club leadership, it is your job to keep the members focused on the mission. Club members also have a responsibility to the club by supporting the mission and not undermining the project just so they can say "I told you so."

People joined your club to get involved. One of the best ways to keep club members is to include them in club business and activities and most importantly, recognize your people for their contributions to the club. Your club newsletter is a terrific vehicle for recognizing members who participate in club activities and programs. Sometimes a special presentation or award may be in line with a member's exemplary involvement. The actual deed is not as important as is the recognition of the people who make it all possible. When others see that the club appreciates the work of the members then more people will be willing to take on jobs and run for office. Mutual effort must be ongoing if a club is to recruit and retain members.

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Happy Birthday April

Day	Name	Call	RCT Number
3	Jeff Hanson	**W7JFF**	770
6	Harry Hudson	**K7LAZ**	2160
7	Alan Ferguson	**N7OMS**	2107
7	Bill Lucas	**KB7IHB**	2114
7	Don Tjossem	**W7DRT**	2346
7	Mike Scott	**KB7UXU**	1602
9	Chris Kennedy	**KB7NMU**	2362
9	Harry Wong	**N7DOE**	1109
11	Bob Teitzel	**WA7ZZA**	771
13	Lee Meyers	**W6PZF**	263
14	Hap Arnold	**KB7UXD**	1610
15	Joe Winter	**WZ7M**	643
16	Jerry Hathaway	**K7ETU**	750
19	Jan Gilbertson	**K7HTU**	434
19	John Makebakken	**N7FOW**	1108
19	Matt Shaw	**KE7KJW**	2326
19	Robert Churchward	**W7RXS**	322
20	Mick Pier	**KK7QS**	1950
23	Chandler Ellis	**KC7EYZ**	1791
24	Randy Gray	**KE7QWU**	2355
25	Bob Gates	**K7IND**	568
26	Vern Hase	**KD7GTZ**	2051
27	Robert Edwards	**N7HXX**	1207
28	Mary Ann Iseri	**KD7HYX**	2063

Bob Churchward's
90th Birthday
Sat., April 19th
4:00 PM to 8:00 pm
Vfw hall 4741 N. Baltimore

No gifts . Potluck if you want to .

W7RXS

RCT #322

Jim & Linda Churchward . 759-8474

The Radio Club of Tacoma's

Logger's Bark

The Logger's Bark **is the *OFFICIAL PUBLICATION OF THE RADIO CLUB OF TACOMA*… and is published by W7DK Press, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law, and all proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98411, phone: 253-759-2040.**

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The Fine Print: The Logger's Bark is published once a month for the membership of The Radio Club of Tacoma or interested ham radio enthusiasts. The Bark is delivered by PDF file on the club's website: www.w7dk.org. RCT Members with limited/no internet access may request that a condensed, paper copy be mailed to their home address. Please contact Rick Rose – KE7EMW at (253) 581-7673 or RCT-Membership@comcast.net to request The Logger's Bark home-delivery.

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Membership Info: FULL (licensed) and ASSOCIATE (non licensed) is $30 per calendar year. $25 for Licensed Seniors (65 and over). Licensed family members at same address pay $15 each for the first two and are free for the third, fourth, and so on. Fulltime students, licensed or non licensed, up to age 25 are $15 per year. Note: fees are applicable for the calendar year: Jan to Dec. Lifetime membership is 20 times the yearly fee you are eligible for.. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.

RADIO CLUB REPEATERS

Central Tacoma: 147.280 + PL=103.5 RCT Packet 144.91
Crawford Mountain (SE Thurston County) 147.380 + PL=103.5
Central Tacoma 440.625 + PL=103.5

THE LOGGER'S BARK
Radio Club of Tacoma, Inc.
P.O. Box 11188
Tacoma, WA 98411

TO RCT MEMBER:

APRIL 2008 EVENTS

Club Meetings: Wednesdays April 9th and 23rd at the library Administration building at 7:30 PM, 112th & Waller road. Everyone is invited to attend.

Board Meeting, Wednesday April 2nd, 7:30 PM at the. Clubhouse - All members welcome.

License Testing - Tuesday April 15th 7:00 PM at the RCT clubhouse.

BARK deadline - Last week-end of every month.. PLEASE get articles, columns, etc. in by that time!

- Support OUR club - Attend meetings, volunteer, Elmer.
- Check in to the 2-meter Net every Tuesday night at 7:30, on 147.28. Hear additional information on programs and other events.
- Check in on the 10 Meter Net every Sunday evening, 8 PM, on 28.375 MHz USB